

Remarks

In the non-final Office Action dated March 20, 2008, the following rejections are present: claims 1-8, 10-16 and 18 stand rejected under 35 U.S.C. § 102(b) over FR 2 680 056 (the '056 reference); claims 1 and 14 stand rejected under 35 U.S.C. § 102(b) over Sauerlander (U.S. Patent No. 6,381,160); and claims 1, 6-8 and 11-14 stand rejected under 35 U.S.C. § 102(e) over Umemoto (U.S. Patent Pub. No. 2003/0231011). The Office Action also notes objections to the disclosure and the abstract, and that claims 9 and 17 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

Applicant respectfully traverses the § 102(b) rejection of claims 1-8, 10-16 and 18 based on the '056 reference because the Office Action failed to provide an English translation of the '056 reference. According to M.P.E.P. § 706.02, "If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection." In this instance the copy of the '056 reference in the file wrapper is in French. This copy was provided by Applicant thereby satisfying the duty of disclosure with respect to the '056 reference. Now that the Office Action is relying upon the '056 reference as the basis for a rejection, a translation of the '056 reference is required. Without such a translation Applicant is unable to determine the propriety of the rejection. Accordingly, the § 102(b) rejection of claims 1-8, 10-16 and 18 is improper and Applicant requests that it be withdrawn. Should any rejection based upon the '056 reference be maintained, Applicant requests a complete and accurate English translation of the '056 reference and an opportunity to respond thereto.

Applicant further traverses the § 102(b) rejection of claims 1-8, 10-16 and 18 because the cited portions of the '056 reference do not appear to correspond to numerous aspects of the claimed invention. Applicant notes that the rejection appears to be based entirely on the Figures of the '056 reference as no citations have been provided to the underlying document. As such, Applicant submits that the Figures only (without a translation of the underlying document) do not adequately support the Office Action's various assertions regarding the alleged teachings of the '056 reference. As a first example, the cited portions of the '056 reference do not appear to correspond to aspects of the claimed

invention directed to adjusting the length of the dead time period according to a voltage difference between the drain and the source of the first or second transistor. Figures 1, 5 and 6 of the '056 reference do not indicate adjusting a dead time period, let alone adjusting the dead time period based on the voltage difference between the drain and the source of one transistor MOS₁ or MOS₂. As a second example, the cited portions of the '056 reference do not appear to correspond to aspects of the claimed invention directed to the connections between the sensing means and the source and drain of the transistor being Kelvin connections. Accordingly, the § 102(b) rejection of claims 1-8, 10-16 and 18 is improper and Applicant requests that it be withdrawn.

In view of the issues presented above, should any rejection based upon the '056 reference be maintained, Applicant respectfully requests an opportunity to respond thereto. According to M.P.E.P. § 706.07, "Before final rejection is in order a clear issue should be developed between the examiner and applicant." Applicant submits that a clear issue has not been developed between Applicant and the Examiner due to the lack of a complete and accurate English translation of the '056 reference and in view of the above discussion. Accordingly, should any rejection based upon the '056 reference be maintained, Applicant should be afforded an opportunity to respond.

Applicant respectfully traverses the § 102(b) rejection of claims 1 and 14 based on the Sauerlander reference because the cited portions of Sauerlander do not correspond to the claimed invention which includes, for example, aspects directed to adjusting the length of the dead time period according to a voltage difference between the drain and the source of the first or second transistor. The cited portions of Sauerlander teach measuring voltages U_{S1} and U_{S2} at switching elements S1 and S2 (*see, e.g.*, Figure 1 and Col. 3:30-51); however, the cited portions of Sauerlander do not indicate that these voltages represent the voltage differences between the drains and sources of switching elements S1 and S2. Thus, the cited portions of Sauerlander do not teach adjusting the length of the dead time period according to the voltage difference between the drain and source of a transistor as in the claimed invention. Accordingly, the § 102(b) rejection of claims 1 and 14 is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses the § 102(e) rejection of claims 1, 6-8 and 11-14 based on the Umemoto reference because the cited portions of Umemoto do not correspond

to the claimed invention which includes, for example, aspects directed to adjusting the length of the dead time period according to a voltage difference between the drain and the source of the first or second transistor. The Office Action erroneously asserts that Umemoto's one-shot vibrator OSV1 somehow adjusts the dead time period. *See, e.g.*, Figure 1. In contrast Umemoto teaches that, when the power supply of FET driving apparatus 1 settles into a steady state and the first pulse of the PWM signal appears, the OSV1 produces a start-up one-shot pulse that causes FET N1 to turn on. *See, e.g.*, Paragraph 0026. Thus, Umemoto's OSV1 has no relation to controlling the length of the dead time period. Applicant submits that the Umemoto reference does not teach adjusting the length of the dead time period according to a voltage difference between the drain and the source. Instead Umemoto controls the switching of FETs N1 and N2 responsive to detecting that either diode BD1 or diode BD2 is on thereby preventing the FETs from being turned on simultaneously. *See, e.g.*, Paragraphs 0028 and 0032. Thus, Umemoto does not adjust a dead time period, but instead directly controls the switching of FETs N1 and N2 responsive to detecting that either diode BD1 or diode BD2 is on. Applicant notes that Umemoto's approach is similar to those described in Applicant's disclosure (*see, e.g.*, Paragraph 0011) as prior art approaches that involve the body diode conducting, which results in undesirable effects; Applicant's approach of adjusting the length of the dead time period according to a voltage difference between the drain and the source allows reduction of the dead time period thereby overcoming deficiencies of the prior art. *See, e.g.*, claims 6-8. Accordingly, the § 102(e) rejection of claims 1, 6-8 and 11-14 is improper and Applicant requests that it be withdrawn.

In response to the objections to the disclosure and the Abstract, Applicant has amended claims 1 and 2 to correct typographical errors, and Applicant has provided an amended Abstract as indicated on page 2 of this paper. Thus, Applicant requests that these objections be removed.

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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